UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/595,064	01/26/2006	Antoine De-Poorter	P17924-US1	2053

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ERICSSON INC.
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EXAMINER
WAQAS, SAAD A

ART UNIT	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>09 June 2006</u>.
2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-58</u> is/are pending in the application.
     4a) Of the above claim(s) <u>1-29</u> is/are withdrawn from consideration.
5)☐ Claim(s) _____ is/are allowed.
6)☒ Claim(s) <u>30-58</u> is/are rejected.
7)☐ Claim(s) _____ is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.
10)☒ The drawing(s) filed on <u>26 January 2006</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
     a)☐ All b)☐ Some * c)☐ None of:
       1.☐ Certified copies of the priority documents have been received.
       2.☐ Certified copies of the priority documents have been received in Application No. _____.
       3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
     * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3)☒ Information Disclosure Statement(s) (PTO/SB/08)
     Paper No(s)/Mail Date <u>6/9/2006;1/26/2006</u>.
4)☐ Interview Summary (PTO-413)
     Paper No(s)/Mail Date. _____.
5)☐ Notice of Informal Patent Application
6)☐ Other: _____.

DETAILED ACTION

This communication is in response to Application No. 10/595064 with effective filing

date of 8/1/2003. Claims 1-29 have been cancelled. Claims 30-58 have been

examined.

Claim Rejections - 35 USC § 102

1.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2.   **Claims 30-58 are rejected under 35 U.S.C. 102(b) as being unpatentable by**

McCanne et al. (US 6,415,323) hereafter McCanne.

Claims 1-29 (Cancelled)

Regarding Claim 30, (New)

A method for routing in a telecommunications system a service request related to a

service (Abstract) [service nodes process application specific requests, Col. 3 / lines 48-

50], comprising the steps of:

        receiving in a communication server entity (router R2) a service request

containing a service identifier (servers advertise reachability to address block A/24 via

IGP) [Col. 7 / lines 35-36] which identifies said service (client sent anycast packet to address A1) [Col. 5 / lines 51-54, 58-60; Col. 7 / lines 45-48];

obtaining addressing information related to said service identifier (translating anycast address to determine services location) [Col. 9 / lines 38-42];

routing said service request using said addressing information (anycast referral node directs client to a service node) [Col. 10 / lines 40-43]; and,

checking a usage rule (load balancing a factor in server selection) [Col. 12 / lines 7-11] which grants the usage of said addressing information, wherein the usage rule comprises at least one use condition selected from the group consisting of:

a time condition defining the maximum time gap for using said addressing information from the first time it is used (time out SN entry that is not refreshed; time out ARN peer entries not refreshed during inter announcement period) [Col. 13 / lines 18-20; 51-54];

and, a maximum usage condition (ARNs determine server availability and load) [Col. 12 / lines 62-64] defining the number of times said addressing information can be used;

wherein the step of routing said service request is performed if said check is passed [Col. 13 / lines 21-23].

Regarding Claim 31, (New)

wherein said at least one use condition is selected from the group consisting of:

a time condition defining a start time for using said addressing information;

a time condition defining a stop time for using said addressing information;

a requesting user condition stating at least one user identifier of at least one user and determining that said user is authorized to use said service (per-client access points perform user specific authentication) [Col. 6 / lines 6-10].

Regarding Claim 32, (New)

wherein said addressing information comprises at least one element selected from:

an address of an application server entity (server devices advertise reachability to block A/24; client send packets to address A1, where "A" is prefix of A1) which hosts said service [Col. 7 / lines 35-37, 45-48];

an address of a communication server entity which can intervene in the routing of a service request containing said service identifier;

and, an address-determining-capability usable to determine an address of a communication server entity which can intervene in the routing of a service request containing said service identifier.

Regarding Claim 33, (New)

further comprising the step of storing in a location server entity (service node) said service identifier (anycast name) [Col. 9 / lines 38-42], said addressing information (reachability to A/24 block advertised) [Col. 7 / lines 35-39], and said usage rule (ARNs build a database for load balancing) [Col. 13 / lines 14-17]

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Regarding Claim 34, (New)

further comprising the step of receiving said usage rule in said location server entity (ARN) from an application server entity (ARNs monitor service nodes messages containing system load information and build a database for use in load balancing) [Col. 13 / lines 12-17].

Regarding Claim 35, (New)

wherein the step of checking said usage rule is performed in said location server entity (ARNs have a database of load balancing information) [Col. 13 / lines 15-17].

Regarding Claim 36, (New)

wherein the step of obtaining addressing information comprises the steps of:

sending from said communication server entity (client) a location query (web request) containing said service identifier (anycast address A) to said location server entity (ARN) [Col. 14 / lines 27-32]; and,

receiving a query response (ARN selects a service node) [Col. 13 / lines 22-24] in said communication server entity (client) containing said addressing information if said check (service node availability and load) [Col. 12 / lines 62-64] is passed.

Regarding Claim 37, (New)

wherein the step of obtaining addressing information comprises the steps of: transmitting from said communication server entity (client) said received service request (web request to anycast address A) to said location server entity (ARN) [Col. 14 / lines 27-32];

and, receiving a redirection indication (redirect client to selected SN) [Col. 14 / lines 29-31] in said communication server entity containing said addressing information if said check (service node availability and load) [Col. 12 / lines 62-64] is passed.

Regarding Claim 38, (New)

further comprising the previous step of storing in said communication server entity (ARN) said service identifier (addresses of service nodes) [Col. 12 / lines 61-62], and said usage rule [Col. 12 / lines 62-64].

Regarding Claim 39, (New)

further comprising the previous step of receiving said usage rule (server capacity, loading, anticipated server delays) in said communication server entity (control element) from a location server entity (received indirectly) [Col. 12 / lines 11-15].

Regarding Claim 40, (New)

further comprising the previous step of receiving said usage rule (server capacity, loading, anticipated server delays) in said communication server entity (control element) from an application server entity (received indirectly) [Col. 12 / lines 11-15].

Regarding Claim 41, (New)

wherein the step of checking said usage rule is performed in said communication server entity [Col. 12 / lines 7-9].

Regarding Claim 42, (New)

A location server entity having:

storage means (ARN, anycast referral node, has a database of available nodes) [Col. 13 / lines 11-17], arranged to store addressing information related to a service identifier (server devices advertise reachability) [Col. 7 / lines 35-37] which identifies a service;

processing means (ARN), arranged to access said storage means to provide said addressing information (ARN directs client to service node) [Col. 10 / lines 40-43];

wherein: said storage means (database) further stores a usage rule (ARN with database of attributes for load balancing) for granting the use of said addressing information [Col. 13 / lines 15-17];

and, said processing means (ARN) is further arranged to check said usage rule (load balancing and server health factors) to determine whether or not said addressing information can be provided [Col. 12 / lines 7-13];

wherein the usage rule comprises at least one use condition selected from the group consisting of:

a time condition defining in said location server entity the maximum time gap for providing said addressing information from the first time it is provided from said location server (time out SN entry that is not refreshed; time out ARN peer entries not refreshed during inter announcement period) [Col. 13 / lines 18-20; 51-54]; and,

a maximum usage condition (load balancing) [Col. 12 / lines 62-64] defining in said location server entity the number of times said addressing information can be provided from said location server entity;

wherein said processing means (ARN) are arranged to check at least one of said

conditions [Col. 13 / lines 21-23].

Regarding Claim 43, (New)

wherein said usage rule comprises at least one use condition selected from:

a time condition defining in said location server entity a start time for providing

said addressing information;

a time condition defining in said location server entity a stop time for providing

said addressing information;

and, a requesting user condition stating at least one user identifier of at least one

user and determining in said location server entity whether said user is authorized to

use said service (per-client access points perform user specific authentication) [Col. 6 /

lines 6-10];

wherein said processing means (ARN) are arranged to check at least one of said

conditions [Col. 13 / lines 15-17,21-23].

Regarding Claim 44, (New)

wherein said addressing information comprises at least one element selected

from:

an address of an application server entity (server devices advertise reachability to block A/24; client send packets to address A1, where "A" is prefix of A1) which hosts said service [Col. 7 / lines 35-37, 45-48];

an address of a communication server entity which can intervene in the routing of a service request containing said service identifier;

and, an address-determining-capability usable to determine an address of a communication server entity which can intervene in the routing of a service request containing said service identifier.

Regarding Claim 45, (New)

further arranged to receive and store a usage rule (database with attributes used in load balancing) in relationship with a service identifier [Col. 13 / lines 15-17].

Regarding Claim 46, (New)

further arranged to receive said usage rule (server capacity, loading, anticipated server delays) from an application server entity (received indirectly) [Col. 12 / lines 11-15].

Regarding Claim 47, (New)

further arranged to transmit (received indirectly) [Col. 12 / lines 11-15] a usage rule (server capacity, loading, anticipated server delays) in relationship with a service identifier to a communication server entity (ARN) which can intervene (directs client to service node) in a service request containing said service identifier [Col. 10 / lines 41-43].

Regarding Claim 48, (New)

further arranged to receive a location query (new service request) containing said service identifier and to answer with a query response (redirects client) containing said addressing information if said check (load balancing) is passed [Col. 13 / lines 15-17, 21-23]..

Regarding Claim 49, (New)

further arranged to receive a service request containing said service identifier and to answer with a redirection indication (directs client to service node) [Col. 10 / lines 41-43] containing said addressing information if said check (load balancing) is passed [Col. 13 / lines 15-17, 21-23]..

Regarding Claim 50, (New)

A communication server entity (router) having processing means operative to: receive a service request containing a service identifier which identifies a service [Col. 7 / lines 45-47];

obtain addressing information related to said service identifier; route a received service request using said addressing information [Col. 7 / lines 45-47];

obtain a usage rule (load balancing a factor in server selection) for granting the use of said addressing information [Col. 12 / lines 7-9];

and, check said usage rule to determine whether or not to route a received service request containing said service identifier (determine node availability and load) [Col. 12 / lines 62-64], wherein the usage rule comprises at least one use condition selected from:

a time condition determining in said communication server entity the maximum time gap for routing service requests containing said service identifier from the first time a service request containing said service identifier has been routed from said communication server entity (time out SN entry that is not refreshed; time out ARN peer entries not refreshed during inter announcement period) [Col. 13 / lines 18-20; 51-54];

and, a maximum usage condition (ARNs determine server availability and load) [Col. 12 / lines 62-64] determining in said communication server entity the number of times it can route service requests containing said service identifier;

wherein said processing means are arranged to check at least one of said

conditions [Col. 13 / lines 21-23].

Regarding Claim 51, (New)

wherein said usage rule comprises at least one use condition selected from:

a time condition determining in said communication server entity a start time for

routing service requests containing said service identifier;

a time condition determining in said communication server entity a stop time for

routing service requests containing said service identifier;

and, a requesting user condition stating at least one user identifier of at least one

user and determining in said location server entity whether said user is authorized to

send a service request containing said service identifier (per-client access points

perform user specific authentication) [Col. 6 / lines 6-10];

wherein said processing means are arranged to check at least one of said

conditions [Col. 13 / lines 21-23].

Regarding Claim 52, (New)

further arranged to send a location query to a location server to obtain said

addressing information and said usage rule (ARNs monitor service nodes messages

containing information about system load and available nodes and build a database for

use in load balancing) [Col. 13 / lines 12-17].

Regarding Claim 53, (New)

further comprising storage means (database) arranged to store said usage rule in

relationship with said service identifier [Col. 13 / lines 15-17], wherein said processing

means are further arranged to obtain said usage rule from said storage means (ARN

selects a node from the list of available nodes) [Col. 13 / lines 22-24].

Regarding Claim 54, (New)

further arranged to receive said usage rule (server capacity, loading, anticipated

server delays) from a location server entity (received indirectly) [Col. 12 / lines 11-15]

and to store it in said storage means (database) [Col. 13 / lines 15 - 17].

Regarding Claim 55, (New)

further arranged to receive said usage rule (server capacity, loading, anticipated

server delays) from an application server entity (received indirectly) [Col. 12 / lines 11-

15] and to store it in said storage means (database) [Col. 13 / lines 15 - 17].

Regarding Claim 56, (New)

An application server entity (server node) having processing means arranged to exchange information with a second server entity (ARN) which can intervene in the signaling of a service request related to a service [Col. 10 / lines 40-43], wherein said processing means are operative to send (received indirectly) [Col. 12 / lines 11-15] to said second server entity a usage rule (server capacity, loading, anticipated server delays) in relationship with a service identifier (server devices advertise reachability) [Col. 7 / lines 35-37] for granting the use of the addressing information usable for routing a service request containing said service identifier (packet to address A forwarded to server) [Col. 7 / lines 45-47], wherein the usage rule comprises at least one use condition selected from:

a time condition determining the maximum time gap for using said addressing information from the first time it is used (time out SN entry that is not refreshed; time out ARN peer entries not refreshed during inter announcement period) [Col. 13 / lines 18-20; 51-54];

and, a maximum usage condition (load balancing) [Col. 12 / lines 62-64] determining the number of times said addressing information can be used.

Regarding Claim 57, (New)

A computer program (agent) for providing information for routing a service request (agent at termination point directs client to a fixed service-node location) [Col.

11 / lines 60-62] containing a service identifier (request to an anycast address) which identifies a service [Col. 11 / lines 58-59], comprising:

a computer-readable program code (agent at termination point) for causing a computer-based location server (ARN) to provide addressing information related to said service identifier (ARN advertises routing reachability to anycast address space) [Col. 12 / lines 44-47];

a computer-readable program code (agent) for causing said computer-based location server (ARN) to check a usage rule (load balancing and server health factors) which grants the usage of said addressing information to determine whether or not said addressing information can be provided [Col. 12 / lines 7-13], wherein the usage rule comprises at least one use condition selected from:

a time condition determining the maximum time gap for using said addressing information from the first time it is used (time out SN entry that is not refreshed; time out ARN peer entries not refreshed during inter announcement period) [Col. 13 / lines 18-20; 51-54];

and, a maximum usage condition (load balancing) [Col. 12 / lines 62-64] determining the number of times said addressing information can be used.

Regarding Claim 58, (New)

A computer program (agent) for routing a service request containing a service identifier which identifies a service [Col. 11 / lines 58-61], comprising:

a computer-readable program code (agent) for causing a computer-based communication server (ARN) to obtain addressing information related to said service identifier (ARN advertises routing reachability to anycast address space) [Col. 12 / lines 44-47];

a computer-readable program code (agent) for causing said computer-based communication server to route the received service request using said addressing information [Col. 11 / lines 60-61];

a computer-readable program code (agent) for causing said computer-based communication server (ARN) to obtain a usage rule which grants the usage of said addressing information (manage load balancing and server health) [Col. 12 / lines 7-13];

and, a computer-readable program code (agent) for causing said computer-based communication server (ARN) to check said usage rule to determine whether or not to route a received service request containing said service identifier (determine node availability and load) [Col. 12 / lines 62-64], wherein the usage rule comprises at least one use condition selected from:

a time condition determining the maximum time gap for using said addressing

information from the first time it is used (time out SN entry that is not refreshed; time out

ARN peer entries not refreshed during inter announcement period) [Col. 13 / lines 18-

20; 51-54];

and, a maximum usage condition (load balancing) [Col. 12 / lines 62-64]

determining the number of times said addressing information can be used.

Conclusion

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to SAAD A. WAQAS whose telephone number is (571)

270-5642. The examiner can normally be reached on M - F 8:00 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Jeffrey Pwu can be reached on (571) 272-6798. The fax phone number for

the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/S. A. W./
Examiner, Art Unit 2446

/Jeffrey Pwu/
Supervisory Patent Examiner, Art Unit 2446